

Phase I Regional Rail Project

Raleigh, North Carolina

(November 2002)

Description

The Phase I Regional Rail project is the first segment of a three-phase regional transit plan for linking the three counties -- Wake, Durham, and Orange -- in the Triangle Region of North Carolina. In Phase I, the Triangle Transit Authority (TTA) intends to initiate regional rail service from Durham to downtown Raleigh and from downtown Raleigh to North Raleigh. TTA proposes to use Diesel Multiple Unit (DMU) rail vehicles to serve the 16 stations proposed for Phase I of the project.

TTA has proposed that the Phase I Regional Rail project will use the existing North Carolina Railroad and CSX rail corridors to connect Duke University, downtown Durham, Research Triangle Park, Raleigh-Durham International Airport, Morrisville, Cary, North Carolina State University, downtown Raleigh, and North Raleigh.

The Regional Rail project will provide a new transportation alternative for one of the region's most congested travel corridors between Raleigh, Research Triangle Park, and Durham. It is projected to generate significant travel-time savings for most of the major activity centers. For example, trips between downtown Durham and Research Triangle Park in the forecast year (2025) will be 36 minutes faster compared to using bus service.

Summary Description	
Proposed Project:	Phase I Regional Rail 35.2 Miles, 16 Stations
Total Capital Cost (\$YOE):	\$832.2 Million
Section 5309 New Starts Share (\$YOE):	\$447.0 Million (54%)
Annual Operating Cost (2025 \$YOE):	\$38.9 Million
Ridership Forecast (2025):	36,200 Average Weekday Boardings 15,400 Daily New Riders
Opening Year Ridership Forecast (2008):	14,000 Average Weekday Boardings
FY 2004 Finance Rating:	Medium
FY 2004 Project Justification Rating:	Medium
FY 2004 Overall Project Rating:	Recommended

The overall project rating of ***Recommended*** is based upon the quality of the financial plan and local efforts to adopt transit supportive land use policies and encourage transit-oriented development. The overall project rating applies to this *Annual Report on New Starts* **and reflects conditions as of November 2002**. Project evaluation is an ongoing process. As New Starts projects proceed through project development, the estimates of cost, benefits, schedules and impacts are refined. **The FTA ratings and recommendations will be updated annually to reflect new information, changing conditions, and refined financing plans.**

The Administration is seeking legislation that would limit the Federal New Starts share to no more than 50 percent beginning in FY 2004. Future ratings of this project would be affected by that change.

Status

In 1995, TTA completed the Triangle Fixed Guideway Study. The Authority's Board of Trustees has adopted the study's recommendations to put into place a regional rail system, and resolutions of support have been received from all major units of local government, chambers of commerce, universities, and major employers in the Triangle area.

In January 1998, FTA approved TTA to initiate Preliminary Engineering and the preparation of a Draft Environmental Impact Statement (DEIS). The DEIS was released in May 2001. Selection of the Locally Preferred Alternative occurred in November 2001 through January 2002, after consideration of the comments received on the DEIS. The LPA includes the following elements: 1) construction of a primarily double track system although the first phase of the project will include only a single track with sections that will be double tracked for passing purposes; 2) phased construction with the first segment between Ninth Street in Durham and the Government Center in downtown Raleigh opening in 2007 and the second segment from Government Center to Spring Forest Road in North Raleigh as well as the extension west to Duke Medical Center opening in 2011; and 3) initial service frequency of 15 minutes during peak periods/30 minutes during off-peak periods changing to ten minutes during peak periods/20 minutes during off-peak periods by 2015. TTA anticipates completion of the Final EIS and a Record of Decision early in January 2003.

TEA-21 Section 3030 (a) (68) authorizes the project for Final Design and construction. Through FY 2002, Congress has appropriated \$50.55 million in Section 5309 New Starts funds for this project.

Evaluation

The following criteria have been estimated in conformance with FTA's *Reporting Instructions for the Section 5309 New Starts Criteria*, updated in June 2002. N/A indicates that data are not available for a specific measure. The project will be reevaluated when it is ready to advance to Final Design, and for next year's *Annual Report on New Starts*.

Project Justification Quantitative Criteria		
Mobility Improvements Rating: Low-Medium		
	<u>New Start vs. Baseline</u>	
Average Employment Per Station	5,878	
Average Low Income Households Per Station	83	
Transportation System User Benefit Per Project Passenger Mile (Minutes)	1.4	
Environmental Benefits Rating: Medium		
<u>Criteria Pollutant Reduced</u> (tons)	<u>New Start vs. Baseline</u>	
Carbon Monoxide (CO)	117	
Nitrogen Oxide (NO _x)	[38]	
Hydrocarbons	8	
Particulate Matter (PM ₁₀)	12	
Carbon Dioxide (CO ₂)	[2,261]	
<u>Annual Energy Savings</u> (million)		
BTU	[26,510]	
Cost Effectiveness Rating: Medium		
	<u>New Start vs. Baseline</u>	
Cost Per Transportation System User Benefit (current year dollars/hour)	\$14.59	
Operating Efficiencies Rating: Medium		
	<u>Baseline</u>	<u>New Start</u>
System Operating Cost per Passenger Mile (current year dollars)	\$0.19	\$0.25

[] indicate an increase in emissions.

Project Justification

Rating: Medium

The *Medium* project justification rating primarily reflects the positive efforts of TTA and local jurisdictions to promote transit-supportive development within the corridor and the average cost effectiveness. Based on 1990 Census data, there are an estimated 1,330 low-income households within a ½-mile radius of the proposed project, roughly 11 percent of total households within ½-mile of the proposed stations. There are approximately 94,051 jobs within ½-mile of the proposed stations. The Raleigh-Durham Metropolitan Area is designated as a “moderate maintenance area” for ozone and a “moderate maintenance area” for carbon monoxide. The Raleigh Regional Rail project has an incremental cost per incremental trip value of \$13.99.

Existing Land Use, Transit-Supportive Land Use Policies and Future Patterns

Rating: Medium

The *Medium* land use rating reflects the generally low densities and poor pedestrian accessibility along the corridor, but acknowledges the positive efforts of TTA and local jurisdictions to promote transit-supportive development within the corridor.

Existing Conditions: Existing land uses adjacent to the proposed rail stations vary and include low to medium-density residential, industrial, and office development as well as undeveloped or underutilized land. Major trip generators in the corridor include Duke University, North Carolina Central University, North Carolina State University, Research Triangle Park (RTP), the Raleigh Central Business District, and the State Fairgrounds. Many of these activity centers will rely largely on feeder bus services to access the proposed system. The corridor currently contains 44 percent of the region's population and 62 percent of its employment. The downtown and RTP stations are predominantly surrounded by employment while others have a mixture of uses. The only sparsely developed land along the corridor is just north and south of RTP, which has single-family and light industrial land uses.

Future Plans, Policies and Performance: TTA developed a conceptual plan for station areas, entitled "Station Area Development Guidelines," and distributed it among the various municipalities to encourage mixed and concentrated land use, adequate access and parking, and pedestrian-oriented station area environments at proposed station sites. The City of Durham adopted an interim overlay district for transit station areas that includes transit-supportive design requirements and development densities, as well as restrictions on uses incompatible with transit. In addition, Durham amended the zoning ordinance to allow for increased residential densities in transit station areas. The Town of Cary adopted the Town Center Area Plan in August 2001, which encourages pedestrian friendly development and completed downtown design guidelines in April 2002. The City of Raleigh completed Urban Design Guidelines for Mixed-Use Neighborhood and Village Centers and began work to update the downtown area plan to address areas surrounding the two downtown stations.

The Triangle Metro Center Station in Research Triangle Park has become the first new, major transit oriented development project in the rail corridor. The Research Triangle Foundation has partnered with a local developer to plan a high density, mixed-use development that will become TTA's regional transportation hub. A number of other station area development proposals are also in the works including renovation of the America Tobacco warehouses near the downtown Durham station into a 16-acre mixed-use complex and a 330-unit residential project across the street from the 9th Street/Duke East station.

Local Financial Commitment

Rating: Medium

The *Medium* local financial commitment rating was determined by the *Medium* rating for the operating financial plan.

Proposed Non-Section 5309 New Starts Share of Total Project Costs: 46%**Rating: Medium**

TTA plans to use Section 5309 New Starts funds, CMAQ funds, State funds from the recently established North Carolina Transit Trust Fund, local rental car tax revenues, and financing methods including cross border leases and bonds backed by the rental car tax revenues to construct the proposed project.

Locally Proposed Financial Plan		
<u>Proposed Source of Funds</u>	<u>Total Funding (\$million)</u>	<u>Percent of Total</u>
Federal:		
Section 5309 – New Starts	\$447.0	53.7 %
CMAQ	\$14.0	1.7 %
State:		
State Appropriation	\$194.0	23.3 %
Local:		
Rental Car Tax	\$36.6	4.4 %
Bonds and Leases	\$126.9	15.2 %
Interest Earnings	\$13.7	1.6 %
Total:	\$832.2	100.0 %

NOTE: Funding proposal reflects assumptions made by project sponsors, and are not DOT or FTA assumptions. Total may not add due to rounding.

Stability and Reliability of Capital Financing Plan**Rating: Medium-High**

The *Medium-High* rating reflects the thoroughness of the capital plan including extensive sensitivity testing, the high degree of commitment of capital funds at this stage of the planning process, and the current capital condition of the agency.

Agency Capital Financial Condition: TTA's capital financial condition is healthy, with strong cash and investment reserves. TTA receives funding from dedicated sources including rental car taxes and vehicle registration fees. TTA's bus fleet has an average age of 2.4 years.

Capital Cost Estimates and Contingencies: Capital cost estimates have increased since last year's submission from \$754.8 million to \$832.2 million. The cost estimates and contingency allowances are reasonable for a project in the Preliminary Engineering stage of project development.

Existing and Committed Funding: Local capital funding is proposed to be generated from TTA's dedicated five percent tax on rental vehicles, which will also be used to support project operations. Although this has been a stable and reliable source of funding historically, it is particularly susceptible to economic downturns and reductions in air travel. Overall,

approximately 17 percent of non-Section 5309 New Starts funds are committed to the project including the local tax revenues, interest earnings on these revenues, and CMAQ funding.

New and Proposed Sources: NCDOT has submitted a letter indicating its intent to execute a State Full Funding Grant Agreement for the project. Funding from the State will come from the recently created North Carolina Transit Trust Fund. State funding accounts for 50.4 percent of the non-Section 5309 New Starts share for the project. Other new sources of funding proposed are cross border leases and the issuance of bonds backed by the rental car tax revenues. Combined, these sources account for 15.2 percent of the non-Section 5309 New Starts share.

Stability and Reliability of Operating Finance Plan

Rating: Medium

The *Medium* rating acknowledges the project's dedicated operating revenue stream and well presented operating plan. It also reflects the uncertainty inherent in such a large increase in system operating expenses over the current system, in addition to the uncertainty in rental car tax revenues following the reduction in air travel over the last year and the suspension of operations by Midway Airlines at the Raleigh-Durham airport, which had been one of its hubs. Lastly, the rating reflects the very optimistic farebox revenue assumptions included in the projections.

Agency Operating Financial Condition: In recent years, TTA has experienced a balanced operating budget, a low but increasing farebox recovery rate, and increasing ridership and operating costs. The current overall operating condition of the agency is good.

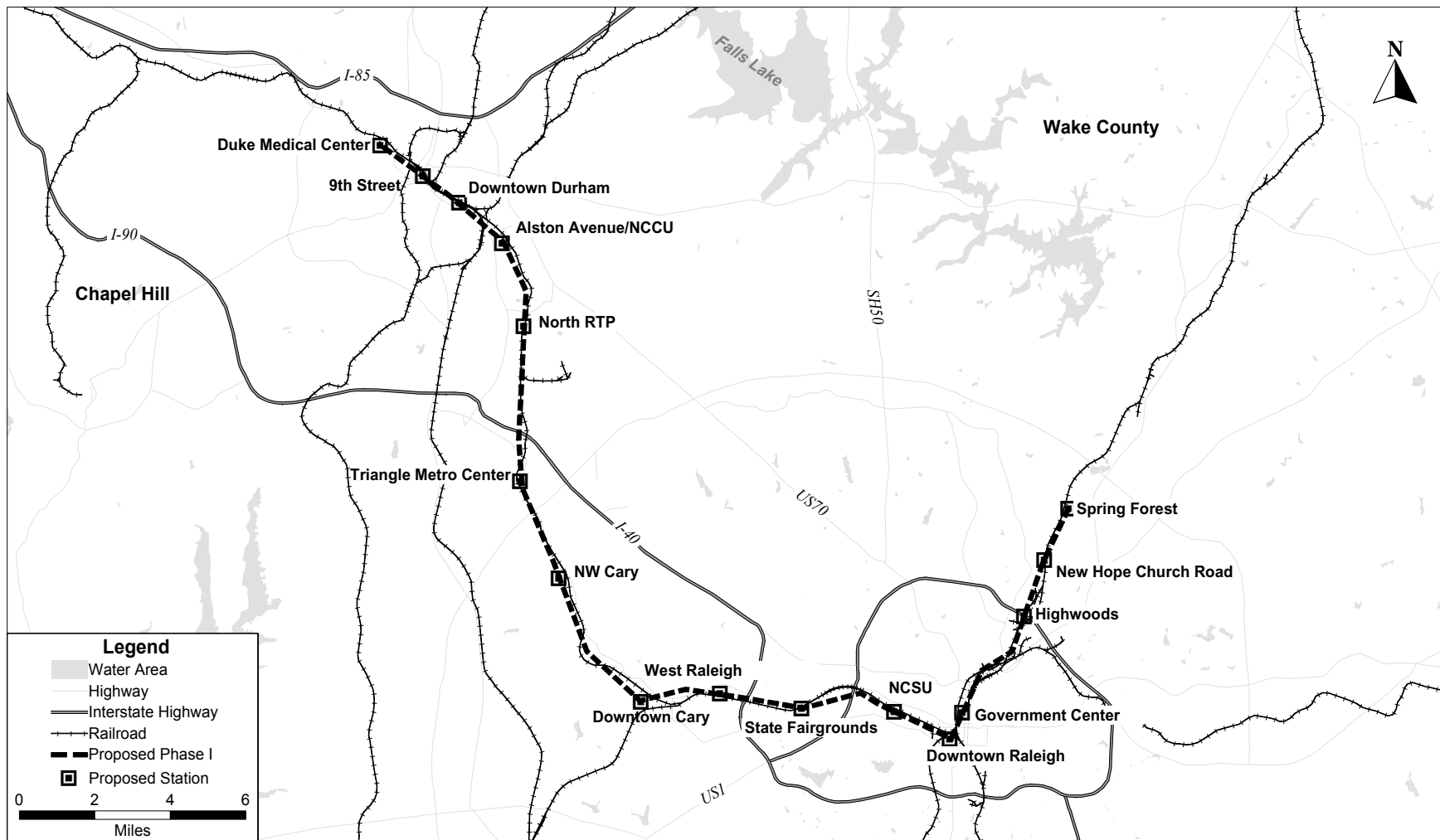
Operating Cost Estimates and Contingencies: Annual operating and maintenance costs for the regional rail project appear to be reasonable and are based on a cost model that examines both fixed and variable operating costs from similar systems. Projected cash balances are equivalent to a minimum of 25 percent (three months) of operating expenditures.

Existing and Committed Funding: Operating and maintenance expenses are proposed to be funded with fare revenues, revenues generated from TTA's dedicated vehicle registration fee and rental vehicle tax, interest earnings, FTA Section 5307 formula funds and state funds. All of these are existing sources of funds. All except for the Section 5307 formula funds and state funding are considered committed. Almost 75 percent of the operating funds are committed.

New and Proposed Funding Sources: No new sources of funding are proposed.

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Federal Transit Administration, 2002

